

## CLAIMS

1. A magnetic bearing controller for supplying a controlled current to an electromagnet for levitating a rotating body at a predetermined position, said controller comprising:  
 5 an electromagnet for generating magnetic force by said controlled current;  
 a power amplifier unit for supplying said controlled current to said electromagnet, said controlled current being pulse width modulated;  
 10 a signal amplifier unit for amplifying signal before inputting to said power amplifier;  
 a status detector unit for detecting a status of said rotating body, said rotating body being levitated by magnetic force which is generated by said electromagnet according to said controlled current; and  
 15 an eliminator unit for eliminating <sup>harmonic</sup> frequency components <sup>having a</sup> [of frequency/area] which is used by said status detector unit, said eliminator unit being inserted between said signal  
 20 amplifier unit and said power amplifier unit.  
<sup>exists in the frequency area area</sup>
2. A magnetic bearing controller according to claim 1, wherein said power amplifier unit is provided with a pulse width modulation circuit which comprises of comparator for comparing  
 25 an input signal with chopper wave signal, and said eliminator is connected at the front end of said comparator.
3. A magnetic bearing controller according to claim 1, wherein said status detector is an inductance type displacement  
 30 sensor.
4. A magnetic bearing controller according to claim 1, wherein said eliminator is a band eliminator filter.

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